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☐ 1: P07044. Mercuric resistan...[gi:127014]

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LOCUS MERR\_SALTI 144 aa linear BCT 01-MAR-2002  
 DEFINITION Mercuric resistance operon regulatory protein.  
 ACCESSION P07044  
 PID gl27014  
 VERSION P07044 GI:127014  
 DBSOURCE swissprot: locus MERR\_SALTI, accession P07044;  
 class: standard.  
 plasmid:pHCM1, IncFI, created: Apr 1, 1988.  
 sequence updated: Apr 1, 1988.  
 annotation updated: Mar 1, 2002.  
 xrefs: gi: gi: [16505740](#), gi: gi: [16505933](#), gi: gi: [150389](#), gi: gi: [455296](#)  
 xrefs (non-sequence databases): InterPro IPR000551, Pfam PF00376,  
 PRINTS PR00040, PROSITE PS00552  
 KEYWORDS Transcription regulation; Activator; Repressor; Mercuric  
 resistance; Mercury; DNA-binding; Plasmid; Transposable element.  
 SOURCE *Shigella flexneri*.  
 ORGANISM *Shigella flexneri*  
 Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;  
 Shigella.  
 REFERENCE 1 (residues 1 to 144)  
 AUTHORS Parkhill, J., Dougan, G., James, K.D., Thomson, N.R., Pickard, D.,  
 Wain, J., Churcher, C., Mungall, K.L., Bentley, S.D., Holden, M.T.G.,  
 Sebahia, M., Baker, S., Basham, D., Brooks, K., Chillingworth, T.,  
 Connerton, P., Cronin, A., Davis, P., Davies, R.M., Dowd, L., White, N.,  
 Farrar, J., Feltwell, T., Hamlin, N., Haque, A., Hien, T.T., Holroyd, S.,  
 Jagels, K., Krogh, A., Larsen, T.S., Leather, S., Moule, S., O'Gaora, P.,  
 Parry, C., Quail, M., Rutherford, K., Simmonds, M., Skelton, J.,  
 Stevens, K., Whitehead, S. and Barrell, B.G.  
 TITLE Complete genome sequence of a multiple drug resistant *Salmonella*  
 enterica serovar Typhi CT18  
 JOURNAL Nature 413 (6858), 848-852 (2001)  
 MEDLINE [21534947](#)  
 REMARK SEQUENCE FROM N.A.  
 SPECIES=*S.typhi*; STRAIN=CT18; PLASMID=pHCM1  
 REFERENCE 2 (residues 1 to 144)  
 AUTHORS Barrineau, P., Gilbert, P., Jackson, W.J., Jones, C.S., Summers, A.O.  
 and Wisdom, S.  
 TITLE The DNA sequence of the mercury resistance operon of the IncFII  
 plasmid NR1  
 JOURNAL J. Mol. Appl. Genet. 2 (6), 601-619 (1984)  
 MEDLINE [85159407](#)  
 REMARK SEQUENCE FROM N.A.  
 SPECIES=*S.flexneri*; PLASMID=IncFII NR1; TRANSPOSON=Tn21  
 COMMENT -----  
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 collaboration between the Swiss Institute of Bioinformatics and

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The original entry is available from <http://www.expasy.ch/sprot>  
and <http://www.ebi.ac.uk/sprot>

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[FUNCTION] MEDIATES THE MERCURIC-DEPENDENT INDUCTION OF MERCURY  
RESISTANCE OPERON. IN THE ABSENCE OF MERCURY MERR REPRESSES  
TRANSCRIPTION BY BINDING TIGHTLY TO THE MER OPERATOR REGION; WHEN  
MERCURY IS PRESENT THE DIMERIC COMPLEX BINDS A SINGLE ION AND  
BECOMES A POTENT TRANSCRIPTIONAL ACTIVATOR, WHILE REMAINING BOUND  
TO THE MER SITE.

[SIMILARITY] BELONGS TO THE MERR FAMILY OF TRANSCRIPTIONAL  
REGULATORS.

FEATURES	Location/Qualifiers
source	1..144 /organism="Shigella flexneri" /plasmid="" /db_xref="taxon:623" 1..144
Protein	1..144 /product="Mercuric resistance operon regulatory protein"
Site	10..29 /site_type="dna-binding" /note="H-T-H MOTIF (POTENTIAL)."
Site	82 /site_type="metal-binding" /note="HG(2+)."
Site	117 /site_type="metal-binding" /note="HG(2+)."
Site	126 /site_type="metal-binding" /note="HG(2+)."

ORIGIN  
1 mennlenlti gvfakaagvn vetirfyqrk gllrepdkpy gsirrygead vvrvkfvksa  
61 qrlgfsld ei aellrlddgt hceeasslae hklkdvrekm adlarmetvl selvcachar  
121 kgnvscplia slqgeaglar samp

//

Revised: October 24, 2001.

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